

**FRIEDMAN & BRUYA, INC.**

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**ENVIRONMENTAL CHEMISTS**

Date of Report: 01/22/04

Date Received: 01/08/04

Project: % of Acid & SG & Fe, 3200 Acid Tanks, PO# M103336, F&BI 401026

Date Analyzed: 01/19/04

**RESULTS FROM THE ANALYSIS OF THE AQUEOUS SAMPLES  
FOR PERCENT OF ACID**

**Sample ID**

Laboratory ID

**Percent of Acid**

**M103336A Large Tank**

401026-01

**11**

**M103336B Small Tank**

401026-02

**10**

**FRIEDMAN & BRUYA, INC.**

**ENVIRONMENTAL CHEMISTS**

Date of Report: 01/22/04

Date Received: 01/08/04

Project: % of Acid & SG & Fe, 3200 Acid Tanks, PO# M103336, F&BI 401026

Date Analyzed: 01/20/04

**RESULTS FROM THE ANALYSIS OF THE AQUEOUS SAMPLES  
FOR SPECIFIC GRAVITY  
@ 15.56 °C**

**Sample ID**

Laboratory ID

**Specific Gravity**

**M103336A Large Tank**

401026-01

**1.28**

**M103336B Small Tank**

401026-02

**1.33**

**FRIEDMAN & BRUYA, INC.**

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**ENVIRONMENTAL CHEMISTS**

Date of Report: 01/22/04

Date Received: 01/08/04

Project: % of Acid & SG & Fe, 3200 Acid Tanks, PO# M103336, F&BI 401026

Date Analyzed: 01/15/04

**RESULTS FROM THE ANALYSIS OF THE AQUEOUS SAMPLE  
FOR FINGERPRINT CHARACTERIZATION  
BY INDUCTIVELY COUPLED PLASMA (ICP)  
EMISSION SPECTROSCOPY**

**Samples Processed Using Method 3005A**

The Metals Were Found at Approximate Levels Indicated

Results Reported as mg/L (ppm)

Sample ID: M103336A Large Tank

Laboratory ID: 401026-01

Iron                      52,000 ppm



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Date of Report: 01/22/04

Date Received: 01/08/04

Project: % of Acid & SG & Fe, 3200 Acid Tanks, PO# M103336, F&BI 401026

Date Analyzed: 01/15/04

**RESULTS FROM THE ANALYSIS OF THE AQUEOUS SAMPLE  
FOR FINGERPRINT CHARACTERIZATION  
BY INDUCTIVELY COUPLED PLASMA (ICP)  
EMISSION SPECTROSCOPY**

**Samples Processed Using Method 3005A**

The Metals Were Found at Approximate Levels Indicated

Results Reported as mg/L (ppm)

Sample ID: M103336B Small Tank

Laboratory ID: 401026-02

Iron                      38,000 ppm

**FRIEDMAN & BRUYA, INC.**

**ENVIRONMENTAL CHEMISTS**

Date of Report: 01/22/04

Date Received: 01/08/04

Project: % of Acid & SG & Fe, 3200 Acid Tanks, PO# M103336, F&BI 401026

**QUALITY ASSURANCE RESULTS  
FROM ANALYSIS FOR PERCENT OF ACID**

Laboratory Code: 401026-02 (Duplicate)

Analyte	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Percent of Acid	10	10	0	0-20

**FRIEDMAN & BRUYA, INC.**

**ENVIRONMENTAL CHEMISTS**

Date of Report: 01/22/04

Date Received: 01/08/04

Project: % of Acid & SG & Fe, 3200 Acid Tanks, PO# M103336, F&BI 401026

**QUALITY ASSURANCE RESULTS  
FOR THE ANALYSIS OF AQUEOUS SAMPLES  
FOR SPECIFIC GRAVITY  
@ 15.56 °C**

Laboratory Code: 401080-01 (Duplicate)

<u>Analyte</u>	<u>Sample Result</u>	<u>Duplicate Result</u>	<u>Relative Percent Difference</u>	<u>Acceptance Criteria</u>
Specific Gravity	0.884	0.883	0.11	0-2



**FRIEDMAN & BRUYA, INC.**

**ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D.  
Charlene Morrow, M.S.  
Yelena Aravkina, M.S.  
Bradley T. Benson, B.S.  
Kurt Johnson, B.S.

3012 16th Avenue West  
Seattle, WA 98119-2029  
TEL: (206) 285-8282  
FAX: (206) 283-5044  
e-mail: fbi@isomedia.com

January 22, 2004

**DUPLICATE COPY**

**INVOICE # 04ACU0122-1**

Accounts Payable  
Alaskan Copper Works  
628 South Hanford  
Seattle, WA 98134

RE: Project % of Acid & SG & Fe, 3200 Acid Tanks, PO# M103336, F&BI 401026  
- Results of testing requested by Gerry Thompson for material submitted on  
January 8, 2004.

2 samples analyzed for Specific Gravity @ \$25 per sample	\$ 50.00
2 samples analyzed for Percent Acid Content @ \$50 per sample	100.00
2 samples analyzed for Total Iron by Method 6010B @ \$30 per sample	<u>60.00</u>
Amount Due .....	\$ 210.00

FEDERAL TAX ID # (b) (6)

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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3012 16th Avenue West  
Seattle, WA 98119-2029  
TEL: (206) 285-8282  
FAX: (206) 283-5044  
e-mail: fbi@isomedia.com

January 22, 2004

Gerry Thompson, Project Manager  
Alaskan Copper Works  
628 South Hanford  
Seattle, WA 98134

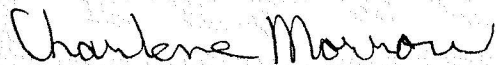
Dear Mr. Thompson:

Included are the results from the testing of material submitted on January 8, 2004 from the % of Acid & SG & Fe, 3200 Acid Tanks, PO# M103336, F&BI 401026 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Charlene Morrow  
Chemist

Enclosures  
ACU0122R.DOC



401026

## SAMPLE CHAIN OF CUSTODY

CM 01/08/04

AI2

Send Report To Gerry ThompsonCompany Alaskan Copper WorksAddress 628 South HanfordCity, State, ZIP Seattle, WA 98134Phone # 382-8379 Fax # 382-4309

SAMPLERS (signature)

PROJECT NAME/NO.

% of Acid: SG: FE  
3200 Acid tanks

PO #

M103336

REMARKS

Page # \_\_\_\_\_ of \_\_\_\_\_

## TURNAROUND TIME

☐ Standard (2 Weeks)☐ RUSH

Rush charges authorized by: \_\_\_\_\_

## SAMPLE DISPOSAL

☐ Dispose after 30 days☐ Return samples☐ Will call with instructions


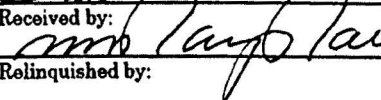
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	Cr, Cu, Ni & Zn	% of Acid	Spec. Gravity	FE										Notes
M103336A	01	1-8-04	11:00				X	X	X										
Large Tank																			
M103336B	02	1-8-04	11:00				X	X	X										
Small Tank																			

Friedman & Bruya, Inc.  
3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	GERRY THOMPSON	ACW	1/8/04	1:20 pm
Received by: 	Nhan Phan	Friedman & Bruya	1/8/04	1:25 pm
Relinquished by:				
Received by:				